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10/697,108	10/31/2003	Werner Beisel	Q78137	8426

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
LEE, SIU M	

ART UNIT	PAPER NUMBER
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/697,108	BEISEL ET AL.	
	Examiner	Art Unit	
	SIU M. LEE	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/31/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 13 is objected to because of the following informalities:

(1) Regarding claim 13:

Line 4, the examiner suggests changing "said input module" to ---**said at least one input module**--- for clarification.

Line 12 recites "means for receiving an internal signal from one on the modules". It is unclear which module it is referring to.

(2) Regarding claims 14, 16, and 19:

Line 2 recites "for outputting outputs". The examiner suggests changing to "for outputting".

(3) Regarding claim 15:

Line 3 recites "from another one of said modules". It is unclear which module it is referring to.

(4) Regarding claim 17:

Line 4 recites "for outputting outputs". The examiner suggests changing to "for outputting".

(5) Regarding claim 18:

Line 2 recites "said modules". It is unclear which module it is referring to.

(6) Regarding claim 24:

Lines 4, 5, 6; the examiner suggests changing "said input module" to ---**said at least one input module**--- for clarification.

Line 11 recites "said modules". It is unclear which module it is referring to.

(7) Regarding claim 25:

Line 3, the examiner suggests changing "said input module" to ---**said at least one input module**--- for clarification.

(8) Regarding claim 26:

Line 4 recites "said modules". It is unclear which module it is referring to.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13-19, 24-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kremer (US 5,390,164).

(1) Regarding claim 13:

Kremer discloses a system (system as shown n figure 1) comprising modules, including at least one input module (ring node 112, 114, 120, 125 in figure 1) and a plurality of internal modules (ring node 112, 114, 120, 125 in figure 1):

said at least one input module and said plurality of internal modules being interconnected (the ring node 112, 114, 120, 125 in figure 1 and the ring node 112, 114, 120, 125 in figure 1 are interconnected as shown in figure 1);

said input module comprising:

means for receiving an external an external communication input signal (receiver 201 in figure 2, column 5, lines 45-50),

means for monitoring said external communication input signal for defect (controller 205 in figure 2, column 6, line 49-60),

means for squelching said external communication input signal when a defect is defected (squelcher 210 in figure 2, column 6, lines 2-4), and

input module means for outputting said squelched external communication input signal as an internal signal when a defect is detected (transmitter 211 in figure 2, column 6, lines 5-6); and

at least one of said plurality of internal modules comprising:

means for receiving an internal signal from one of the modules (the examiner interpret the module is the at least one input module) (demux 901 in figure 9, column 12, lines 65-68), and

means for monitoring whether said received internal signal is squelched (controller 903 in figure 9, column 13, lines 15-21).

(2) Regarding claim 14:

Kremer discloses wherein said input module means for outputting said external communication input signal as an internal signal when a defect is not defected (the selection of the VT signals is such that the corrupted and / or failed VT signals are not selected, therefore, the selected VT signals are combined via multiplexer 906 to obtain the desired inter-ring groomed STS-1 signal (T), column 13, lines 21-25).

(3) Regarding claim 15 (the examiner interprets the said module is the at least one input module):

Kremer discloses wherein said at least one of said plurality of internal modules further comprises:

means for receiving a redundant internal signal from another one of said modules (the cross connected system 132 in figure 9 receives a first STS-1 signal (T') being supplied from ring node 120, column 12, lines 65-66 and another STS-1 signal (R') from secondary interworking ring node 114 in shared node 131, column 13, lines 8-10);

internal module means for outputting said redundant internal signal as an internal signal when said received internal signal is defected as squelched (the controller 903 evaluates the VT signals on a pair-wise basis in both DEMUX 901 and DEMUX 905 to determine the best VT signal in each pair and then causes selector 904 to select the best VT signals, the evaluation may include monitoring the VT signals for less of signal, AIS and / or bit error rate, column 13, lines 15-21).

(4) Regarding claims 16 and 27:

Kremer discloses wherein said internal modules means for outputting said received internal signal as an internal signal when said received internal signal is not detected as squelched (Kremer discloses a system that contains a transmission of multiple signal instead of one signal, The multiple signal is being compare by controller 903 and evaluates the paired signal in each of selector 904-1 to 904-Y, the evaluation may include monitoring for loss of signal, AIS and / or bit rate error, the selection of the

VT signals is such that the corrupted and / or failed VT signals are not selected, column 13, lines 15-25).

(5) Regarding claims 17 and 28:

Kremer discloses wherein said at least one of said plurality of internal modules further comprises means for monitoring said received internal signal for defects (the multiple signal is being compare by controller 903 and evaluates the paired signal in each of selector 904-1 to 904-Y, the evaluation may include monitoring for loss of signal, AIS and / or bit rate error, the selection of the VT signals is such that the corrupted and / or failed VT signals are not selected, column 13, lines 15-25); and

said internal means for outputting said redundant internal signal as an internal signal when a defect is detected and outputs said received internal signal as an internal signal when a defect is not detected and said received internal signal is not detected as squelched ((Kremer discloses a system that contains a transmission of multiple signal instead of one signal, The multiple signal is being compare by controller 903 and evaluates the paired signal in each of selector 904-1 to 904-Y, the evaluation may include monitoring for loss of signal, AIS and / or bit rate error, the selection of the VT signals is such that the corrupted and / or failed VT signals are not selected, column 13, lines 15-25).

(6) Regarding claim 18 (the examiner interprets the said module is the at least one input module):

Kremer discloses wherein said module further includes at least one output module comprising:

means for receiving an internal signal from one of said plurality of internal modules (interface 224 in figure 2 receives an internal signal (T) from one of said plurality of internal modules (the output T from the cross connect system 132 in figure 9);

means for monitoring whether said received internal signal is squelched (controller 205 monitor and control the status of interface 224 and the digital signal being supplied thereto via bus 227, specifically, controller 205 monitors interface 224 for loss-of-signal, coding violation and the like, column 8, lines 7-12);

means for receiving a redundant internal signal from another one of plurality of internal modules (receiver 214 in figure 2 receives signal on path 117 as shown in figure 2, it is shown in figure 11 that the signal on path 117 is coming from Ts which is from the digital cross connect system 133 as shown in figure 1); and

output module means for outputting said redundant internal signal as an output signal when said received internal signal is detected as squelched (the signal from receiver 214 and the signal from the interface 224 are both pass on to the selector 209, under abnormal conditions, i.e. a failure or the like of the STS-M signal supplied from the interface 224, selector 209 is controlled to select a secondary communication circuit being supplied from ring tone 114, column 7, lines 16-20).

(7) Regarding claim 19 and 30:

Kremer discloses wherein said output module means for outputting said received internal signal as an output signal when said received internal signal is not detected as squelched (a signal (T) to be added at the ring node is supplied to interface 224, then it

is supplied to broadcast element 226 where it is replicated and supplied to selector 207 and 209, selector under control of controller 205, select the signal being added fro transmission in the service or protection bandwidth on either transmission path 116 or 117, column 7, lines 40-51).

(8) Regarding claim 24:

Kremer discloses a method for processing a data signal within a communication device, said communication device comprising modules, including at least one input module (ring node 112, 114, 120, 125 in figure 1) and a plurality of internal modules (ring node 112, 114, 120, 125 in figure 1), said method comprising:

receiving, by said input module, an external communication input signal (receiver 201 in figure 2 receives external signal from path 116, column 5, lines 45-50),

monitoring, by said input module, said external communication input signal for defects (controller 205 in figure 2, column 6, line 49-60),

squelching, by said input module, said external communication input signal when a defect is detected (squelcher 210 in figure 2, column 6, lines 2-4), and

outputting, by said input module, said squelched external communication input signal as an internal signal when a defect is detected (transmitter 211 in figure 2, column 6, lines 5-6);

receiving, by at least one of said plurality of internal modules, an internal signal from one of said modules (the examiner interpret the module is the at least one input module) (demux 901 in figure 9, column 12, lines 65-68), and

monitoring, by said at least one of said plurality of internal modules, whether said received internal signal is squelched (controller 903 in figure 9, column 13, lines 15-21).

(9) Regarding claim 25:

Kremer disclose further comprising

outputting, by said input module, said external communication input signal as an internal signal when a defect is not detected (the selection of the VT signals is such that the corrupted and / or failed VT signals are not selected, therefore, the selected VT signals are combined via multiplexer 906 to obtain the desired inter-ring groomed STS-1 signal (T), column 13, lines 21-25).

(10) Regarding claim 26:

Kremer discloses further comprising:

receiving, by said at least one of said plurality of internal modules, a redundant internal signal from another one of said modules (the cross connected system 132 in figure 9 receives a first STS-1 signal (T') being supplied from ring node 120, column 12, lines 65-66 and another STS-1 signal (R') from secondary interworking ring node 114 in shared node 131, column 13, lines 8-10); and

outputting, by said at least one of said plurality of internal modules, said redundant internal signal as an internal signal when said received internal signal is detected as squelched (Kremer shows method for multiple signals, the controller 903 evaluates the VT signals on a pair-wise basis in both DEMUX 901 and DEMUX 905 to determine the best VT signal in each pair and then causes selector 904 to select the

best VT signals, the evaluation may include monitoring the VT signals for less of signal, AIS and / or bit error rate, column 13, lines 15-21).

(11) Regarding claim 29:

Kremer discloses a method wherein said modules of said communication device further including at least one output module, said method further comprising:

receiving, by said output module, an internal signal from one of said plurality of internal modules (interface 224 in figure 2 receives an internal signal (T) from one of said plurality of internal modules (the output T from the cross connect system 132 in figure 9);

monitoring, by said output module, whether said received internal signal is squelched (controller 205 monitor and control the status of interface 224 and the digital signal being supplied thereto via bus 227, specifically, controller 205 monitors interface 224 for loss-of-signal, coding violation and the like, column 8, lines 7-12);

receiving, by said output module, a redundant internal signal from another one of said plurality of internal modules (receiver 214 in figure 2 receives signal on path 117 as shown in figure 2, it is shown in figure 11 that the signal on path 117 is coming from Ts which is from the digital cross connect system 133 as shown in figure 1); and

outputting, by said output module, said redundant internal signal as an output signal when said received internal signal is detected as squelched (the signal from receiver 214 and the signal from the interface 224 are both pass on to the selector 209, under abnormal conditions, i.e. a failure or the like of the STS-M signal supplied from

the interface 224, selector 209 is controlled to select a secondary communication circuit being supplied from ring tone 114, column 7, lines 16-20).

4. Claims 20 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US 5,390,164) in view of Feinberg et al. (US 2002/0167694 A1).

Kremer discloses all the subject matter as discuss in claims 13 and 24 except wherein said monitoring means comprises a threshold detector.

However, Feinberg et al. discloses a monitoring means comprises a threshold detector (the processor 240 in figure 2 determine if the signal output by the photodiode 220 is below a threshold level, if it is below a threshold level, it indicates that there is a problem on the path and switch between service and protection path, paragraph 0025, lines 7-13).

It is desirable to have the monitoring means comprises a threshold detector because it can detect failure of a service path by the photodiode is very fast since there are few if any propagation delay, paragraph 0045, lines 2-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Feinberg et al. in the system of Kremer to improve the reliability of the system.

5. Claims 21 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US 5,390,164) in view of Fee (US 6,285,475 B1).

Kremer discloses all the subject matter as discuss in claims 13 and 24 except wherein said monitoring means comprises a frequency detector.

However, Fee discloses wherein said monitoring means comprises a frequency detector (signal detector 680 in figure 6A include a tone detector tuned to the subcarrier modulation frequency to selectively determine the presence of the monitoring signal 610 (a subcarrier signal 610 may range from 1KHz to 10KHz), column 9, lines 24-26, lines 49-58).

It is desirable to have the monitoring means comprises a frequency detector because by detecting the sub-carrier signal, fault can be determined reliably and cheaply (column 6, lines 43-44). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Fee in the system of Kremer to improve the reliability and lower the cost of the system.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US 5,390,164) in view of Ramaswami et al. (US 6,597,826 B1).

Kremer discloses all the subject matter as discussed in claim 13 and further discloses wherein said system is a cross connect device (column 3, lines 38-63).

Kremer fails to disclose wherein at least one of said plurality of internal modules is a switching matrix components.

However, Ramaswami et al. discloses that communication device is a cross-connect device (optical cross-connect switching system 100 in figure 1, column 4, lines 19-21) and wherein said interconnected modules are switching matrix components (the

first optical switch core 240 includes a first optical switch matrix 241 and a second optical switch matrix 242, column 5, lines 33-35).

It is desirable for the communication device to be a cross-connect device and wherein said interconnected modules are switching matrix components because it provides low-loss bridging capabilities (column 2, lines 11-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Ramaswami et al. in the system of Kremer to improve the reliability of the system.

7. Claims 23 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US 5,390,164) in view of Iwamoto et al. (US 5,790,520).

Kremer discloses all the subject matter as discuss in claims 13 and 24 except wherein said predetermined signal status of said data signal is zero (low signal).

However, Iwamoto et al. discloses an unequipped signal wherein all bits of the signal are zero (column 3, lines 65-67).

It is desirable to have the predetermined signal status of said data signal is zero because a service can be continuously carried out without interruption by automatically switching (column 5, lines 1-4). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to employ the teaching of Iwamoto et al. in the system of Kremer to improve the reliability of the system.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lauder et al. (US 2002/0135835 A1) discloses an optical traffic grooming. De Boer et al. (US 6,658,013 B1) discloses a method and apparatus for ensuring survivability of inter-ring traffic. Frankel et al. (US 5,187,706) discloses dual access rings for communication networks. Hoch et al. (US 7,180,867 B2) discloses an apparatus and method for flow path based fault detection and service restoration in a packet based switching system. Kremer (US 6,807,190 B1) discloses a survivable distribution of broadcast signals in loopback rings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SIU M. LEE whose telephone number is (571)270-1083. The examiner can normally be reached on Mon-Fri, 7:30-4:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Siu M Lee/
Examiner, Art Unit 2611
3/26/2008

/CHIEH M FAN/

Supervisory Patent Examiner, Art Unit 2611